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10/696,239	10/28/2003	Richard Hodges	OCTVP008	5275

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Plantronics Inc
Legal/Intellectual Property Department
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EXAMINER

HAROLD, JEFFEREY F

ART UNIT

PAPER NUMBER

2646

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,239

Applicant(s)

HODGES ET AL.

Examiner

Jefferey F. Harold

Art Unit

2646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 11-25 and 27-42 is/are rejected.
7) ☒ Claim(s) 6-10 and 26 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically the limitation in line 11 "plurality of discrete frequency bands". It is unclear to the examiner were in the disclosure discrete frequency bands is supported. For the purposes of the rejection recited below. The examiner has omitted the claim limitation referring to discrete frequency bands.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. ***Claims 1-5, 11-16, 20-25, 27-31, and 33-40*** rejected under 35 U.S.C. 102(e) as being anticipated by Bjarnason (United States Patent 6,795,547).

Regarding **claim 1** Bjarnason discloses a full duplex speakerphone providing increased loop stability. In addition, Bjarnason discloses a level adjusting device for use with a near-end telephone, the near-end telephone being operable to generate an outgoing signal directed to a far-end telephone and to receive an incoming signal generated at least in part by the far-end telephone, the device comprising: a first signal processor operable to dynamically adjust a first signal level associated with the outgoing signal with reference to the first signal level; and a second signal processor operable to dynamically adjust a second signal level associated with the incoming signal with reference to the second signal level; wherein the first and second signal processors are further operable to control a loop gain to inhibit loop instability, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 2**, Bjarnason discloses everything claimed as applied above (see claim 1), in addition Bjarnason discloses wherein the first and second signal processors are operable to dynamically adjust the first and second signal levels in a plurality of bands, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 3**, Bjarnason discloses everything claimed as applied above (see claim 2) in addition Bjarnason inherently discloses plurality of bands comprises one of 2, 3, 4, and 5 bands, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 4**, Bjarnason discloses everything claimed as applied above (see claim 2) in addition Bjarnason inherently discloses wherein the plurality of bands are

selected such that a range of frequencies associated with DTMF signaling is entirely encompassed within a single band, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 5**, Bjarnson discloses everything claimed as applied above (see claim 1), in addition Bjarnson discloses wherein the each of the first and second signal processors comprises a static gain control component (e.g. detection mode) and a dynamic gain control component, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 11**, Bjarnson discloses everything claimed as applied above (see claim 5), in addition Bjarnson discloses wherein the incoming and outgoing signals comprise analog signals, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 12**, Bjarnson discloses everything claimed as applied above (see claim 11), in addition, Bjarnson discloses wherein the analog signals conform to one of a US or international standard specification for connecting a telephone set to a telephone network as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 13**, Bjarnson discloses everything claimed as applied above (see claim 11), in addition, Bjarnson discloses circuitry for separating and combining the incoming and outgoing signals for processing by the first and second signal processors, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 14**, Bjarnson discloses everything claimed as applied above (see claim 13), in addition, Bjarnson discloses wherein the circuitry comprises first and second hybrids, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 15**, Bjarnson discloses everything claimed as applied above (see claim 1), in addition, Bjarnson discloses wherein the incoming and outgoing signals comprise digital signals, as disclosed at column 7, line 50 through column 9, line 22 and exhibited in figure 4.

Regarding **claim 16**, Bjarnson discloses everything claimed as applied above (see claim 15), in addition, Bjarnson inherently discloses wherein the digital signals conform to one of a plurality of specification for connecting a digital telephone set to a digital telephone network, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 20**, Bjarnson discloses everything claimed as applied above (see claim 1), in addition, Bjarnson discloses a near-end echo canceller operable to reduce echo in the outgoing signal, and a far-end echo canceller operable to reduce echo in the incoming signal, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 21**, Bjarnson discloses everything claimed as applied above (see claim 20), in addition, Bjarnson a near-end speech detector for detecting near-end speech and controlling the near-end echo canceller in response thereto, and a far-end speech detector for detecting far-end speech and controlling the far-end echo canceller

in response thereto, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 22**, Bjarnson discloses everything claimed as applied above (see claim 1), in addition, Bjarnson discloses wherein the first and second signal processors are operable to control the loop gain by decreasing at least one of a first gain associated with the first signal processor and a second gain associated with the second signal processor with reference to a combined gain which represents at least a portion of the loop gain, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 23**, Bjarnson discloses everything claimed as applied above (see claim 22), in addition, Bjarnson discloses wherein the first and second signal processors are operable to control the loop gain by decreasing the first gain when the outgoing signal does not correspond to outgoing speech energy, and decreasing the second gain when the incoming signal does not correspond to incoming speech energy, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 24**, Bjarnson discloses everything claimed as applied above (see claim 13), in addition, Bjarnson discloses wherein each of the first and second gains comprises a plurality of gain components each of which contributes to the combined gain, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 25**, Bjarnson discloses everything claimed as applied above (see claim 24), in addition, Bjarnson discloses wherein the first and second signal processors are operable to control the loop gain by decreasing only selected ones of the plurality of gain components, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 27**, Bjarnson discloses everything claimed as applied above (see claim 24), in addition, Bjarnson discloses where the first and second signal processors are further operable to inhibit increases in selected ones of the gain components in the absence of speech energy, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 28**, Bjarnson discloses everything claimed as applied above (see claim 22), in addition, Bjarnson discloses wherein the combined gain includes a loss component determined with reference to the incoming and outgoing signals, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 29**, Bjarnson discloses everything claimed as applied above (see claim 28), in addition, Bjarnson discloses wherein the loss component comprises an estimate of an echo return loss, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 30**, Bjarnson discloses everything claimed as applied above (see claim 29), in addition, Bjarnson discloses wherein the estimate is determined with reference to a difference signal representative of a difference between a return energy

signal corresponding to the incoming signal and an outgoing energy signal corresponding to the outgoing signal, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claim 31**, Bjarnson discloses everything claimed as applied above (see claim 30), in addition, Bjarnson discloses wherein the estimate deemphasizes speech energy in the incoming signal, as disclosed at column 5, line 27 through column 7, line 49 and exhibited in figures 2 and 3.

Regarding **claims 33-40** they are interpreted and thus rejected for the reasons set forth above in the rejection of claims 1-5, 11-16, 20-25, 27-31.

Claim Rejections - 35 USC § 103

3. ***Claims 17-19, 41 and 42*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjarnson in view of well known prior art.

Regarding **claim 17**, Bjarnson discloses everything claimed as applied above (see claim 1), however, Bjarnson fails to disclose bypass circuitry operable to bypass the first and second signal processors, however, the examiner maintains that is was well known in the art to provide bypass circuitry operable to bypass the first and second signal processors. Further, there can be no invention in mererly providing means to selectively alternate between one unpatentable configuration of elements and another unpatentable configuration of old elements, where there is no new or different function. See *The Duplan Corporation v. Deering Milliken, Inc., et al.*, 197 USPQ 342 (DC SC 197).

Regarding **claims 18 and 19** they are interpreted and thus rejected for the reasons set forth above in the rejection of claim 17.

Regarding **claims 41 and 42** are Bjarnson discloses a level adjusting device for use with a near-end telephone, the near-end telephone being operable to generate an outgoing signal directed to a far-end telephone and to receive an incoming signal generated at least in part by the far-end telephone, the device comprising: a first signal processor operable to dynamically adjust a first signal level associated with the outgoing signal with reference to the first signal level; and a second signal processor operable to dynamically adjust a second signal level associated with the incoming signal with reference to the second signal level; wherein the first and second signal processors are further operable to control a loop gain to inhibit loop instability and wherein each of the signal processors comprises a dynamic gain control component and the dynamic gain control component being to dynamically adjust the corresponding signal level. However, Bjarnson fails to disclose a static gain control component wherein the static gain control component being generally statically adjust to corresponding signal level and is generally static at least for the duration of each telephone call, however, the examiner maintains that is was well known in the art to provide static control since static control is affectively not changing the gain control but leaving it constant. Further, there can be no invention in merely providing means to selectively alternate between one unpatentable configuration of elements and another unpatentable configuration of old elements, where there is no new or different function. See *The Duplan Corporation v.*

Deering Milliken, Inc., et al., 197 USPQ 342 (DC SC 197). Thus claims 41 and 42 are rejected since they disclose merely switching between static and dynamic control.

Allowable Subject Matter

4. ***Claims 6-10 and 26*** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed December 14, 2005 have been fully considered but they are not persuasive. Specifically the amendment to claim is addressed above with the 112 rejection and the newly added claims 41 and 42 are rejected above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is 571-272-7519. The examiner can normally be reached on Monday - Friday 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JFH
March 2, 2006



Jefferey F Harold
Primary Examiner
Art Unit 2646